



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,768	03/22/2004	Junji Nakamura	04-234	1247

34704 7590 05/22/2006
BACHMAN & LAPOINTE, P.C.
900 CHAPEL STREET
SUITE 1201
NEW HAVEN, CT 06510

EXAMINER

JOHNSON, JONATHAN J

ART UNIT	PAPER NUMBER
----------	--------------

1725

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/805,768	Applicant(s) NAKAMURA, JUNJI	
	Examiner Jonathan Johnson	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 2-6 and 13-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 7-12 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,918,529 (Tsukaguchi). Tsukaguchi teaches a metal/ceramic bonding substrate wherein a metal member is bonded to at least one side of a ceramic substrate (10) via an active metal containing brazing filler metal (12), the method comprising the steps of: bonding a metal member to at least one side of a ceramic substrate via an active metal containing brazing filler metal (claim 1); applying a resist on a predetermined portion of a surface of the metal member to etch a part of the metal member (16), and removing the resist; etching a part of a metal layer, which is mainly formed of a metal other than an active metal of the active metal containing brazing filler metal (figure 2b, item 14), with a first chemical; and selectively etching a part of an active metal layer, which is formed of the active metal and a compound thereof, with a second chemical which inhibits the metal member and the metal layer from being etched and which selectively etch the active metal layer, to form a metal circuit on the ceramic substrate (figure 3a, item 12); wherein said chemical for selectively etching said active metal layer contains a compound forming a complex with said active metal, an oxidizer and an alkali (col. 7, ll. 1-60), wherein said alkali is

Art Unit: 1725

one selected from the group consisting of ammonia, sodium hydroxide and potassium hydroxide, or a material being alkaline when it is dissolved in water (col. 7, ll. 1-60); wherein said compound forming a complex with said active metal is an acidic compound (col. 7, ll. 1-60) wherein said acidic compound is a carboxylic acid type compound (col. 7); wherein said acidic compound is one selected from the group consisting of citric acid, diethylenetriaminepentaacetic acid (DTPA), ethylenediaminetetraacetic acid (EDTA), hydroxyethylethylenediaminetriacetic acid (HEDTA), 1,3-propanediaminetriacetic acid (1,3PDTA), nitrilotriacetic acid (NTA) and hydroxyethylidenediphosphoric acid (HEDT) (col. 7, l. 20-35); wherein said oxidizer is one selected from the group consisting of hydrogen peroxide, potassium dichromate and potassium permanganate (col. 7, ll. 5-67).

Claims 1 and 7-12 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,613,450 (Tsukaguchi). Tsukaguchi teaches a metal/ceramic bonding substrate wherein a metal member is bonded to at least one side of a ceramic substrate (10) via an active metal containing brazing filler metal (12), the method comprising the steps of: bonding a metal member to at least one side of a ceramic substrate via an active metal containing brazing filler metal (claim 1); applying a resist on a predetermined portion of a surface of the metal member to etch a part of the metal member, and removing the resist; etching a part of a metal layer, which is mainly formed of a metal other than an active metal of the active metal containing brazing filler metal (figure 2, item 14), with a first chemical; and selectively etching a part of an active metal layer, which is formed of the active metal and a compound thereof, with a second chemical which inhibits the metal member and the metal layer from being etched and which selectively etch the

Art Unit: 1725

active metal layer, to form a metal circuit on the ceramic substrate (figure 3, item 12); wherein said chemical for selectively etching said active metal layer contains a compound forming a complex with said active metal, an oxidizer and an alkali (col. 6, example 1); wherein said alkali is one selected from the group consisting of ammonia, sodium hydroxide and potassium hydroxide, or a material being alkaline when it is dissolved in water (example 1); wherein said compound forming a complex with said active metal is an acidic compound (example 1); wherein said acidic compound is a carboxylic acid type compound (example 1); wherein said acidic compound is one selected from the group consisting of citric acid, diethylenetriaminepentaacetic acid (DTPA), ethylenediaminetetraacetic acid (EDTA), hydroxyethylethylenediaminetriacetic acid (HEDTA), 1,3-propanediaminetriacetic acid (1,3PDTA), nitrilotriacetic acid (NTA) and hydroxyethylidenediphosphoric acid (HEDT) (example 1); wherein said oxidizer is one selected from the group consisting of hydrogen peroxide, potassium dichromate and potassium permanganate (example 1).

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., etching the brazing filler material after the resist is removed from the metal member) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

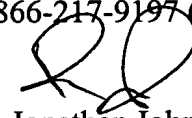
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 571-272-1177. The examiner can normally be reached on M-Th 7:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Johnson
Primary Examiner
Art Unit 1725

jj